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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/809,595
Filing Date: March 25, 2004
Appellant(s): FERENCZ ET AL.

Julie W. Meder
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 29, 2007 appealing from the Office action mailed October 17, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct. The examiner notes, for the sake of clarity, that appellant's arguments against the grounds of rejection outlined in section VI of the brief are addressed as follows in section VII of the brief:

Grounds of rejection listed in section VI	Argued under the following heading in Section VII
1	B1
2	C1
3	D1
4	B2
5	C2
6	D2
7	C3
8	B3

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

WO 00/69916	**Giezen et al.**	**11-2000**
WO 98/17726	**Sherman et al.**	**04-1998**
5,844,071	**Williams et al.**	**12-1998**

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 2, 6-9, 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Giezen et al. (WO 00/69916; published November 23, 2000).

Regarding claims 1 and 2, Giezen et al. teach a method for producing biopolymer nanoparticles/powder coating compositions (paragraphs [0012-0013]) comprising: A) feeding starting materials comprising a resin/biopolymer and additives (paragraphs [0002-0006; 0013]) and a crosslinking agent (paragraphs [0007-0009]) to an extruder; B) shear mixing the starting materials at ambient temperature in a first portion of the extruder; C) melt mixing the material from step B in a second portion of the extruder so as to achieve a melt mix; and D) cooling the melt mix of step C in a third portion of the extruder (Abstract; paragraph [0014]).

As to claim 6, Giezen et al. reduce the temperature by about 10 °C prior to exiting the extruder (paragraph [0014, 0022]).

As to claim 7, Giezen et al. teach the powder coating/biopolymer nanoparticles are crosslinked/thermoset (paragraphs [0007-0009]).

As to claim 8, Giezen et al. teach the material of step B is melt mixed between about 80-100 °C.

Regarding claim 9, Giezen et al. teach a method for producing biopolymer nanoparticles/powder coating compositions (paragraphs [0012-0013]) wherein starting materials comprising a resin/biopolymer and additives (paragraphs [0002-0006; 0013]) and a crosslinking agent (paragraphs [0007-0009]) are extruded and the extruder is divided into three portions, an initial ambient portion, an intermediate heated portion and a final cooled portion (paragraph [0014]).

As to claim 12, Giezen et al. heat the starting material to a temperature between 60 to 80 °C higher than the initial ambient temperature of 20 °C (paragraph [0014]).

As to claim 13, Giezen et al. melt mix the starting materials for the purpose of producing a final product in a controlled manner (paragraph [0014]). As such, the heating is clearly focused (e.g. directed toward a particular purpose).

Claims 1, 2, 6-9 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Sherman et al. (WO 98/17726; published April 30, 1998).

Regarding claims 1 and 2, Sherman et al. teach a method of making polymer mixtures comprising: A) feeding start materials comprising a resin and a crosslinking agent to an extruder; B) shear mixing the start materials at ambient temperature in a first portion of the extruder; C) melt mixing the material from step B in a second portion of the extruder so as to achieve a melt mix; and D) cooling the melt mix of step C in a third portion of the extruder (page 3, lines 15-30; page 49, lines 1-12).

As to claim 6, Sherman et al. reduce the temperature by about 20 °C prior to exiting the extruder (page 49, lines 1-12).

As to claim 7, the polymer mixtures may be thermosetting (page 3, lines 15-30).

As to claim 8, Sherman et al. melt the mixture at a temperature of about 150 °C (page 49, lines 1-12).

Regarding claim 9, Sherman et al. teach a method for producing polymer mixtures wherein starting materials comprising a resin and crosslinking agents are extruded and the extruder is divided into three portions, an initial ambient portion, an intermediate heated portion and a final cooled portion (page 3, lines 15-30; page 49, lines 1-12).

As to claim 13, Sherman et al. melt mix the starting materials for the purpose of producing a final product in a controlled manner (pager 49, lines 1-12). As such, the heating is clearly focused (e.g. directed toward a particular purpose).

Claims 1, 2, 6, 7, 9 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Williams et al. (U.S. Patent 5,844,071; issued December 1, 1998).

Regarding claims 1 and 2, Williams et al. teach a method of manufacturing an coating composition comprising: A) feeding start materials comprising a resin and a crosslinking agent to an extruder; B) shear mixing the start materials at ambient temperature in a first portion of the extruder; C) melt mixing the material from step B in a second portion of the extruder so as to achieve a melt mix; and D) cooling the melt mix of step C in a third portion of the extruder (Abstract; col. 6, lines 8-25; col. 7, lines 12-30).

As to claim 6, Williams et al. cool the melt mix by about 20-25 °C prior to exiting the extruder (col. 7, lines 21-28).

As to claim 7, the composition produced by Williams et al. is a thermosetting coating.

Regarding claim 9, Williams et al. teach a method for producing a coating composition wherein starting materials comprising a resin and crosslinking agents are extruded and the extruder is divided into three portions, an initial ambient portion, an intermediate heated portion and a final cooled portion (Abstract; col. 7, lines 12-30).

As to claim 13, Williams et al. melt mix the starting materials for the purpose of producing a final product in a controlled manner (Abstract; col. 7, lines 12-30). As such, the heating is clearly focused (e.g. directed toward a particular purpose).

Claims 3-5, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Giezen et al. (WO 00/69916; published November 23, 2000), as applied to claims 1, 2, 6-9, 12 and 13 above.

As to claims 3-5, 10 and 11 Giezen et al. teach the method of claims 1 and 9 as discussed in the 102(b) rejection above. Giezen et al. do not explicitly disclose the specifically recited lengths of the portions of the extruder.

However, one having ordinary skill in the extrusion art would recognize that the employed length parameters of an extruder are dependent on the materials being processed, the required production rates, the rating of the electric motor, and the level of fouling and wear in the extruder, for example. One of ordinary skill would have to take all these variables into account when determining the specific lengths of portions of the extruder. As such, the lengths of the different portions of the extruder are a recognized result effective control variable that would have been readily optimized, as is routinely done in the art.

Claims 3-5, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman et al. (WO 98/17726; published April 30, 1998) as applied to claims 1, 2, 6-9 and 13 above.

As to claims 3-5, 10 and 11 Sherman et al. teach the method of claims 1 and 9 as discussed in the 102(b) rejection above. Sherman et al. do not explicitly disclose the specifically recited lengths of the portions of the extruder.

However, one having ordinary skill in the extrusion art would recognize that the employed length parameters of an extruder are dependent on the materials being processed, the required production rates, the rating of the electric motor, and the level of fouling and wear in the extruder, for example. One of ordinary skill would have to take all these variables into account when determining the specific lengths of portions of the extruder. As such, the lengths of the different portions of the extruder are a recognized result effective control variable that would have been readily optimized, as is routinely done in the art.

Claims 3-5, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams et al. (U.S. Patent 5,844,071; issued December 1, 1998) as applied to claims 1, 2, 6, 7, 9 and 13 above.

As to claims 3-5, 10 and 11 Williams et al. teach the method of claims 1 and 9 as discussed in the 102(b) rejection above. Williams et al. do not explicitly disclose the specifically recited lengths of the portions of the extruder.

However, one having ordinary skill in the extrusion art would recognize that the employed length parameters of an extruder are dependent on the materials being processed, the required production rates, the rating of the electric motor, and the level of fouling and wear in the extruder, for example. One of ordinary skill would have to take all these variables into account when determining the specific lengths of portions of the extruder. As such, the lengths of the different portions of the extruder are a recognized result effective control variable that would have been readily optimized, as is routinely done in the art.

Claims 12 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman et al. (WO 98/17726; published April 30, 1998) as applied to claims 1, 2, 6-9 and 13 above.

As to claims 12 and 14, Sherman et al. teach the methods of claim 9 and 13 as discussed in the 102(b) rejection above and further exemplify heating the material to a temperature of 180 °C. However, it would have been *prima facie* obvious to one having ordinary skill in the art at the time of the claimed invention to optimize the specific extrusion temperature as required to produce the desired product from the different starting materials employed by Sherman et al. Further, the period of time a melt mix is heated to a particular temperature in a given portion of an extruder is a function of the residence time of the material

in that portion, the material being processed (e.g. heat capacity of the material), the dimensions of the screw, the degradation properties of the material, and the production rate. Therefore, the time a melt mix is heated to a particular temperature in a portion of the extruder is a recognized result effective control variable that would have been readily optimized as is routinely practiced in the art.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Giezen et al, (WO 00/69916; published November 23, 2000) as applied to claims 1, 2, 6-9, 12 and 13 above.

As to claim 14, Giezen et al. teach the method of claim 13 as discussed in the 102(b) rejection above. Giezen et al. further heat the material within the range of 70 °C to 150 °C. Giezen et al. do not expressly state the length of time the shear mix is heated.

However, the period of time a melt mix is heated to a particular temperature in a given portion of an extruder is a function of the residence time of the material in that portion, the material being processed (e.g. heat capacity of the material), the dimensions of the screw, the degradation properties of the material, and the production rate. Therefore, the time a melt mix is heated to a particular temperature in a portion of the extruder is a recognized result effective control variable that would have been readily optimized as is routinely practiced in the art.

(10) Response to Argument

Appellant essentially argues that the preambles of claims 1 and 9 should be granted patentable weight. Specifically, appellant argues that the following statements in the preambles: "for manufacturing powder coatings", found in claim 1, and "for manufacturing powder coating compositions", found in claim 9, should be granted patentable weight.

Appellant further argues and concludes that when the preambles of claims 1 and 9 are given patentable weight, the prior art applied against the claims fails to anticipate or render obvious the claimed subject matter. The examiner disagrees.

As an initial matter, the examiner takes note that the brief does not appear to dispute the examiner's position that the claimed process steps found in the body of the claims are anticipated by or rendered obvious by the applied art as set forth in the rejection. The entire crux of the argument appears to be two pronged: 1) the "powder coating" recitations found in the preambles of the claims should be given patentable weight and 2) when the "powder coating" recitations are given patentable weight, the applied art fails to anticipate or render obvious the claimed subject matter.

In the following response, the examiner addresses the two pronged argument by: 1) explaining why it is the examiner's position that the preambles of the claims are not entitled to patentable weight and 2) demonstrating how, under a scenario in which patentable weight is afforded the preambles, at least some of the applied references do meet the claims under a reasonable interpretation of the recitation "powder coating". Essentially, it is the examiner's position that the instant claims have not overcome the art of record whether or not the preambles of claims 1 and 9 are afforded patentable weight.

Appellant's arguments in support for granting patentable weight to the preamble are given in section VII of the brief under heading A. Appellant has argued that the preamble, directed to powder coatings, is essential to the invention. Appellant further argues that while they are not urging that disclosure of the specification be imported into the claims, a proper reading of the specification shows how appellants define their invention. The examiner disagrees.

As an initial response, the examiner cites MPEP 707.07(f) ¶7.37.10: A preamble is generally not accorded any patentable weight where it **merely recites the purpose of a process** or the intended use of a structure, **and where the body of the claim does not depend on the preamble for completeness but, instead, the process steps** or structural limitations **are able to stand alone**. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). (emphasis added for this particular scenario).

Additionally, as found in MPEP 2111.02: During examination, statements in the preamble reciting the purpose or intended use of the claimed invention must be evaluated to determine whether the recited purpose or intended use results in a structural difference (**or, in the case of process claims, manipulative difference**) between the claimed invention and the prior art. If so, the recitation serves to limit the claim. See, e.g., In re Otto, 312 F.2d 937, 938, 136 USPQ 458, 459 (CCPA 1963) (emphasis added).

The examiner submits that in the instant case, the preambles amount to merely reciting the purpose of a process and do not result in a manipulative difference. The body of the claims are able to stand alone. Accordingly, it is the examiner's position that the preambles are not entitled to patentable weight and that appellant's further arguments against the prior art (i.e. that the references don't teach or suggest "powder coatings") are thereby rendered moot.

However and additionally, in a scenario under which the term "powder coating" in the preambles is afforded patentable weight, the examiner initially notes that the term "powder coating" is not specifically and narrowly defined in the instant disclosure and is, for the purposes of examination, to be interpreted as broadly as the term reasonably allows in light of the specification (MPEP 2111.01). Moreover, the examiner notes that there is no actual step of

applying or using the powder coatings recited in the instant claims to further define the scope of the term within the claims.

For example, Williams discloses a method of producing an ink composition that may be in powder form (Abstract; col. 6, lines 8-24, particularly 20-24; col. 7, lines 13-30). The examiner submits that an ink composition in powder form is reasonably interpreted to be a "powder coating", as instantly claimed.

Furthermore, Giezen et al. disclose a method of making nanoparticles for use in resin coating applications (page 3, paragraph 13). The examiner submits that the small size of the nanoparticles is reasonably interpreted to meet the limitation "powder" and that in use in coating applications the nanoparticles can reasonably be understood to be a "powder coating", as instantly claimed.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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